

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

Claims 1 – 12. (Canceled)

Claim 13. (Currently amended) A method for noninvasively determining a physiological characteristic of a patient's blood, comprising the steps of:

providing a tissue probe having a first radiation emitter with a first wavelength and a first radiation detector configured to receive the first wavelength after absorbance through the patient's blood;

placing said tissue probe proximate an extremity of the patient;

placing said extremity at an initial position whereby said tissue probe is positioned at a first probe position relative to a level corresponding to the patient's heart;

measuring absorbance of the patient's blood at said first probe position by emitting a first radiation through the patient's blood and detecting the radiation after passage through the patient's blood ~~with the probe at a first position relative to a level corresponding to the patient's heart;~~

computing a blood parameter at ~~[[the]]~~ said first probe position based on ~~[[the]]~~ said first probe position absorbance;

moving ~~the probe~~ said extremity to a plurality of extremity positions relative to ~~a level corresponding to the patient's heart to a second position~~ said first probe position;

measuring absorbance ~~at the second position~~ of the patient's blood at each of said plurality of extremity positions;

~~computing the blood parameter based on the absorbance at the second position; and
determining the physiological characteristic by comparing the absorbance at the first and second position~~

comparing the rate of change of absorbance at each of said plurality of extremity positions with said first probe position absorbance to determine a plurality of rate of change of absorbance values; and

determining central venous drainage from said rate of change of absorbance values.

Claims 14 – 18. (Canceled)

Claim 19. (Currently amended) The method of Claim 13, further comprising the steps of determining the hydrostatic pressure difference between the position of ~~the first~~ said tissue probe corresponding to said central venous drainage and ~~the level corresponding to the patient's heart~~ said first probe position and calculating the central venous pressure from ~~[[the]]~~ said hydrostatic pressure difference.

Claims 20 – 25. (Canceled)

Claim 26. (New) A method for noninvasively determining a patient's cardiac output, comprising the steps of:

providing a first tissue probe having a first radiation emitter and a first radiation detector, said first radiation emitter being adapted to emit first radiation having at least a first wavelength, said first radiation detector being adapted to receive said first radiation after absorbance through the patient's blood;

providing a second tissue probe having a second radiation emitter and a second radiation detector, said second radiation emitter being adapted to emit second radiation having at least a second wavelength, said second radiation emitter being adapted to receive said second radiation after absorbance through the patient's blood,

placing said first tissue probe proximate a first extremity of the patient;
placing said second tissue probe proximate a second, opposing extremity of the patient;
positioning said first extremity at a first extremity position whereby said first probe is positioned substantially coincident with a level corresponding to the patient's heart;

positioning said second extremity at a second extremity initial position whereby said second tissue probe is positioned below said first tissue probe;

raising said second extremity to a plurality of second extremity levels;
measuring absorbance of the patient's blood in said first extremity by emitting said first radiation through the patient's blood and detecting said first radiation after passage through the patient's blood;

substantially continuously measuring absorbance of the patient's blood in said second extremity during said raising of said second extremity by emitting said second radiation through the patient's blood and detecting said second passage through the patient's blood;

determining the rate of change of second extremity absorbance at each of said second extremity levels relative to said first extremity absorbance to determine a plurality of rate of change of absorbance values; and

determining central venous drainage from said rate of change of absorbance values.

Claim 27. (New) The method of Claim 26, further comprising the steps of determining the hydrostatic pressure difference between the position of said second tissue probe corresponding to said central venous drainage and said first probe position and calculating central venous pressure from said hydrostatic pressure difference.